

AD-A183 765

SELECTED TRENDS IN CONTRACT TYPE USAGE(U) ARMY  
PROCUREMENT RESEARCH OFFICE FORT LEE VA  
H G NORTON ET AL. MAY 87 APRO-87-89-1

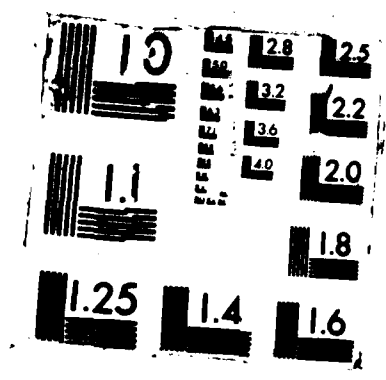
1/1

UNCLASSIFIED

F/G 5/1

NL





AD-A183 765

**APRO**

APRO 87-89-1  
FINAL

**SELECTED TRENDS IN CONTRACT TYPE USAGE**

MAY 1987

DTIC  
ELECTE  
AUG 03 1987  
S D

**ARMY PROCUREMENT RESEARCH OFFICE**  
**OFFICE OF THE ASSISTANT SECRETARY OF THE ARMY**  
**(RESEARCH, DEVELOPMENT AND ACQUISITION)**  
**FORT LEE, VIRGINIA 23801-6045**

This document has been approved  
for public release and sale; its  
distribution is unlimited.



87 7 30 090

APRO 87-89-1  
FINAL

SELECTED TRENDS IN CONTRACT TYPE USAGE

by

Monte G. Norton

Donna Y. Martin

MAY 1987

Information and data contained in this document are based on input available at the time of preparation. This document represents the view of the author and should not be construed to represent the official position of the United States Army.

The pronouns "he", "his", and "him", when used in this publication, represent both the masculine and feminine genders unless otherwise specifically stated.

Approved for Public Release, Distribution Unlimited

OFFICE OF THE ASSISTANT SECRETARY  
US ARMY PROCUREMENT RESEARCH OFFICE  
Fort Lee, Virginia 23801-6045

# TABLE OF CONTENTS

	<u>PAGE</u>
A. Background.....	1
B. Objectives.....	1
C. Approach.....	1
D. Data Presentation.....	1
E. Data Analysis.....	3
F. Findings.....	4

<b>Accession For</b>	
NTIS GRA&I	<input checked="" type="checkbox"/>
DTIC TAB	<input type="checkbox"/>
Unannounced	<input type="checkbox"/>
Justification	
By	
Distribution/	
Availability Codes	
Dist	Avail and/or Special
A-1	



## LIST OF CHARTS

<u>CHART</u>	<u>PAGE</u>
1. Total Dollars Spent on Fixed Price Contracts by Service.....	6
2. Total Dollars Spent on Cost Reimbursement Contracts by Service.....	7
3. Percent of Dollars Spent by Contract Type.....	8
4. Percent of Dollars Spent on Firm Fixed Price Contracts by the Army...	9
5. Percent of Total Dollars Spent on Fixed Price Contracts by the Army..	10
6. Percent of Total Dollars Spent on Cost Reimbursement Contracts by the Army.....	11
7. Number of Fixed Price Contract Actions by Service.....	12
8. Number of Cost Reimbursement Contract Actions by Service.....	13
9. Percent of Actions by Contract Type.....	14
10. Percent of Firm Fixed Price Actions by the Army.....	15
11. Percent of Actions by Fixed Price Contracts by the Army.....	16
12. Percent of Total Actions by Cost Reimbursement Contracts by the Army.....	17

## SELECTED TRENDS IN CONTRACT TYPE USAGE

### A. BACKGROUND.

Contracting managers are more effective if they can plan for the future rather than react to situations as they develop. Trend analysis is frequently a useful tool in forecasting future conditions and is used here to better understand expectations for future contracting.

In order to ascertain the existence of contracting trends, it was thought to be beneficial to collect limited contracting-related data from FY 1975 through FY 1985 and analyze it. In the event trends were shown to exist, those trends that merited further investigation could be examined in more detail.

### B. OBJECTIVES.

The objectives of this study were to review and analyze contract type data for possible trends that provide insights or suggest areas for further investigation.

### C. APPROACH.

The approach was to collect individual historical contract related data which is summarized by the DD 350 reports. The data was first compiled in table format. However, to enhance comparison of data points the final results are presented in line-chart format. These charts were analyzed for trends and/or inflection points and are presented in this report. An attempt was then made to explain the causes of the trends and major changes without expending considerable resources.

### D. DATA PRESENTATION.

Data was extracted from the DOD Prime Contract Awards Report which is published semi-annually by the Office of the Secretary of Defense, Washington Headquarters Services, Directorate for Information Operations and Reports

(WHS/DIOR). Specifically, information on dollars spent and number of contract actions were collected for the Army, Navy, Air Force and the Defense Logistics Agency for fiscal years 1975 through 1985. The following charts present selected trends and comparisons among the services based on the extracted data.

A major problem for trend analysis was created by the change in reporting actions in 1982. Prior to 1982 all actions greater than \$10,000 were reported. After 1982, only actions greater than \$25,000 were reported. This change is obvious in many of the attached charts. Nevertheless, charts were prepared to discern whatever trend information was available from the data.

Charts 1 through 6 focused on various breakdowns of the dollars spent, while Charts 7 through 12 focused on breakdowns of the number of contractual actions.

Charts 1 and 2 simply show the total dollars spent on fixed-price contracts and cost-reimbursement contracts, broken out by the various services, for the period of time examined.

Chart 3 shows the percent of dollars spent by the various services, on either fixed-price or cost-reimbursement contracts.

Chart 4 shows the percent of firm-fixed-price price dollars spent by the Army while chart 5 shows the percent of dollars spent by the Army on fixed-price contracts other than firm-fixed-price contracts.

Chart 6 shows the percent of dollars the Army spent on cost-reimbursement contracts, broken out by contract type.

Chart 7 shows the number of fixed-price contract actions broken down by the various services. Chart 8 shows the same information for cost-reimbursement contracts.

Chart 9 is similar to Chart 3 (percent of dollars spent using fixed-price/cost-reimbursement contracts) except that the focus is on actions instead of dollars.

Chart 10 shows the percent of firm-fixed-price actions placed by the Army in relation to all contractual actions. Chart 11 presents similar information to the previous chart by breaking out the fixed-price contracts, other than firm-fixed-price, and showing their percent of total actions.

Chart 12 shows the percent of total actions that the Army placed on cost-reimbursement contracts.

#### **E. DATA ANALYSIS.**

As shown in charts 1 and 2, there has been a substantial increase in total dollars spent for both fixed-price and cost-reimbursement contracts. Likewise, the number of actions for both fixed-price and cost-reimbursement contracts have also increased as shown in charts 7 and 8. This is true across all three services and DLA, although there are slight variations among services as to percentage increases.

Generally the data reflects the increase in overall defense spending that is associated with the 1981 change in the Administration.

As shown in chart 3, the percent of dollars spent on fixed-price contracts has increased relative to cost-reimbursement contracts for all services. There has been no change in the DLA percentage, since 100% of these actions are fixed-price. Chart 4 shows some variability for the Army over time, but a substantial increase is evident from 52% in FY75 to 66% in FY85.

A further breakout of Army fixed-price contracts in chart 5 shows little change in percent of dollars spent for redeterminable contracts (about 1%) and a balancing of incentive fee and economic price adjustment (EPA) contracts (about 11%). There is an unexplained dramatic decline in EPA contracts in 1979.

Chart 6 reflects the gradual decrease in all cost-reimbursement contracts other than no fee. Cost-reimbursement (no fee) contracts have been a relatively constant 2% to 3% over the eleven year period.

The change in dollar reporting threshold is obvious in chart 7, but it still shows a doubling in number of fixed-price actions for all three services from FY75 to FY82. This increase may be a reflection of Army policy which encourages fixed-price contracting or of the Army systems moving into production and fielding. Despite the change in the reporting threshold, dollars spent on Army supply contracts have grown from \$7,181M in FY 1979 to \$20,760M in FY 1985. During the same period, expenditures on R&D contracts exhibit a more moderate increase from \$1,870M to \$2,498M. Chart 8 shows a similar increase for Navy cost-reimbursement contracts but little change for the Army and Air Force. These charts give a gross indication of workload and suggest that a comparison with personnel staffing levels over the same time period would be appropriate.

Chart 9 shows a slight increase in fixed-price contracts as a percent of total actions until FY82 and then a slight decrease through FY85 for all three services. This inflection is probably also due to the change in dollar reporting threshold. Likewise, the upward trend in Army firm-fixed price actions is evident in chart 10 through FY82. Charts 11 and 12 break out the balance of contract types over FY75 to FY85. No dramatic changes are evident.

#### F. FINDINGS.

This project provides a graphic description of the total dollars spent and number of contract actions for all services and DLA for FY75 through FY85. It is unfortunate that the change in action reporting distorts the figures, but in reviewing the figures the reader must extend the 1982 data and modify as deemed necessary to find the "true" trends.

The primary findings on contract type trends are:

o Fixed-price dollars in the Army are up substantially in the 11 year period - from six billion dollars in FY75 to over 26 billion dollars in FY85 for actions over \$25,000.

o At the same time cost-reimbursement dollars have at least doubled.

o The ratio of fixed-price to cost-reimbursement dollars has gradually increased over these years.

o Firm-fixed-price percent has increased from 52% to at least 65% with great variability.

o Fixed-price actions roughly doubled from FY75 to FY82 when the reporting threshold increased.

o The fixed-price percent of actions has increased slightly (with a corresponding slight decrease in cost-reimbursement actions).

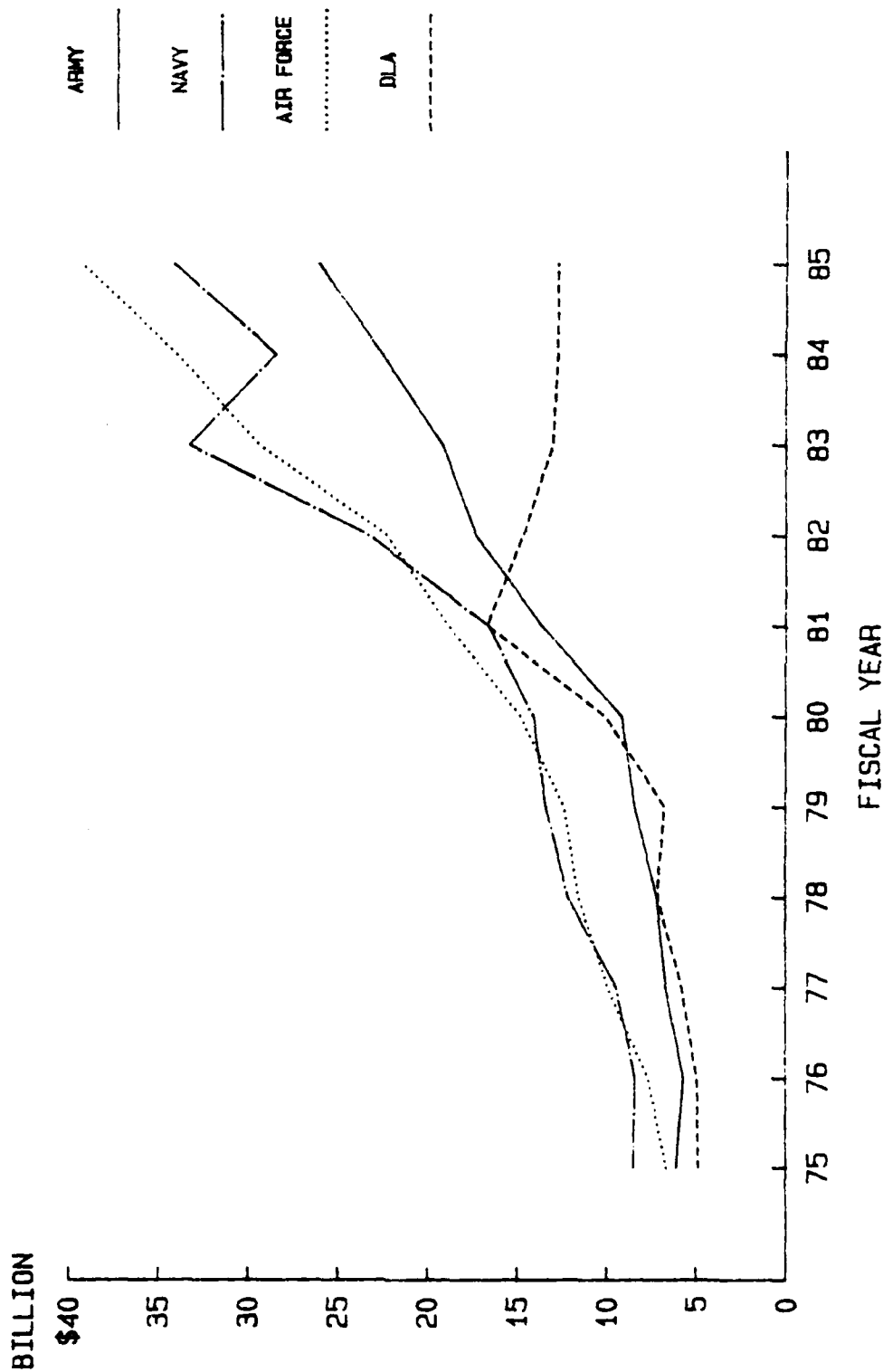
o Firm-fixed-price actions have also increased somewhat as a percent of total actions.

o The far greater increase in fixed-price and firm-fixed-priced dollars versus actions indicate that much of this change has been in large value contracts. This increase could be a reflection of Army R&D policy change or more likely because of the huge increase in Army supply contracts of more R&D systems moving into production.

o Curiously no other contract types showed significant trends over the years, but cost-plus-fixed-fee contracts have shown great variability in dollars and actions. No new contract types of any kind have been introduced. This lack of movement in cost-reimbursement contract type in the face of considerable environmental change may indicate an inertial bias.

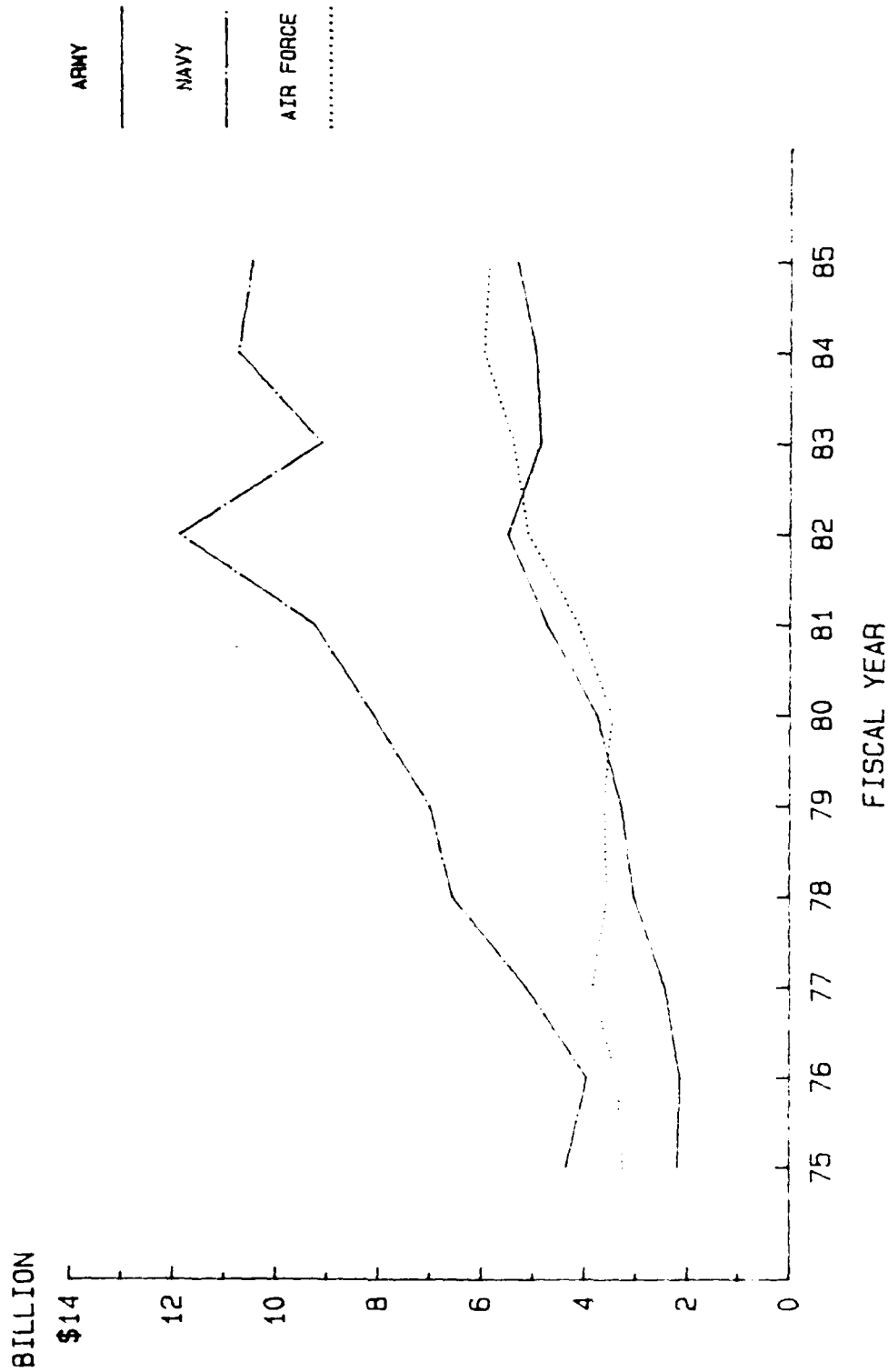
o No other inferences can be made without additional research beyond the mere observation of contract-type data.

# CHART 1 TOTAL DOLLARS SPENT ON FIXED-PRICE CONTRACTS BY SERVICE (IN BILLIONS)



FY 75 - 82 = ACTIONS OVER \$10,000  
 FY 83 - 85 = ACTIONS OVER \$25,000

# CHART 2 TOTAL DOLLARS SPENT ON COST-REIMBURSEMENT CONTRACTS BY SERVICE (IN BILLIONS)



FY 75 - 82 = ACTIONS OVER \$10,000  
FY 83 - 85 = ACTIONS OVER \$25,000

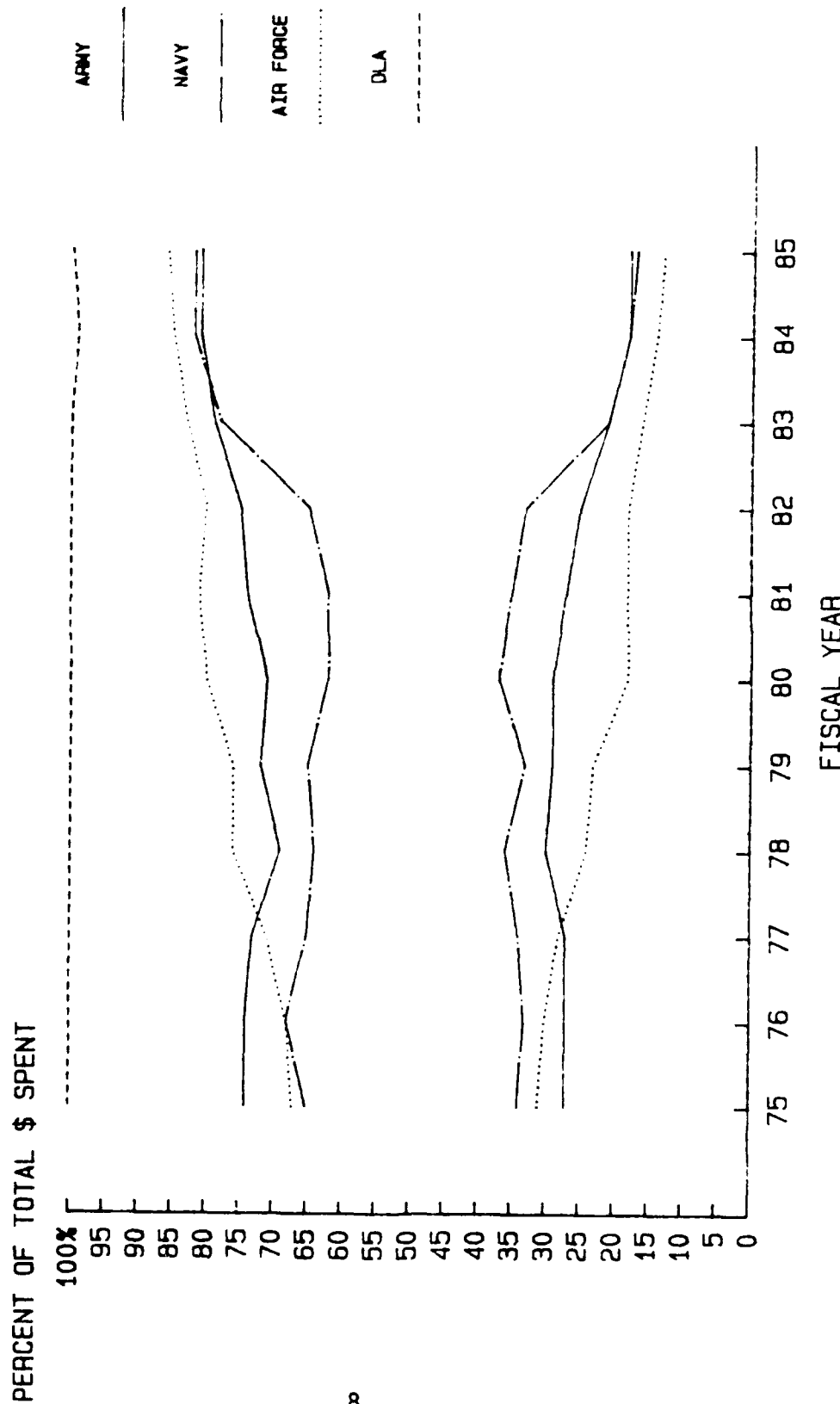
NO COST-REIMBURSEMENT CONTRACTS REPORTED BY OLA

# PERCENT OF DOLLARS SPENT BY CONTRACT TYPE

CHART 3

UPPER SCALE = FIXED-PRICE CONTRACTS

LOWER SCALE = COST-REIMBURSEMENT CONTRACTS

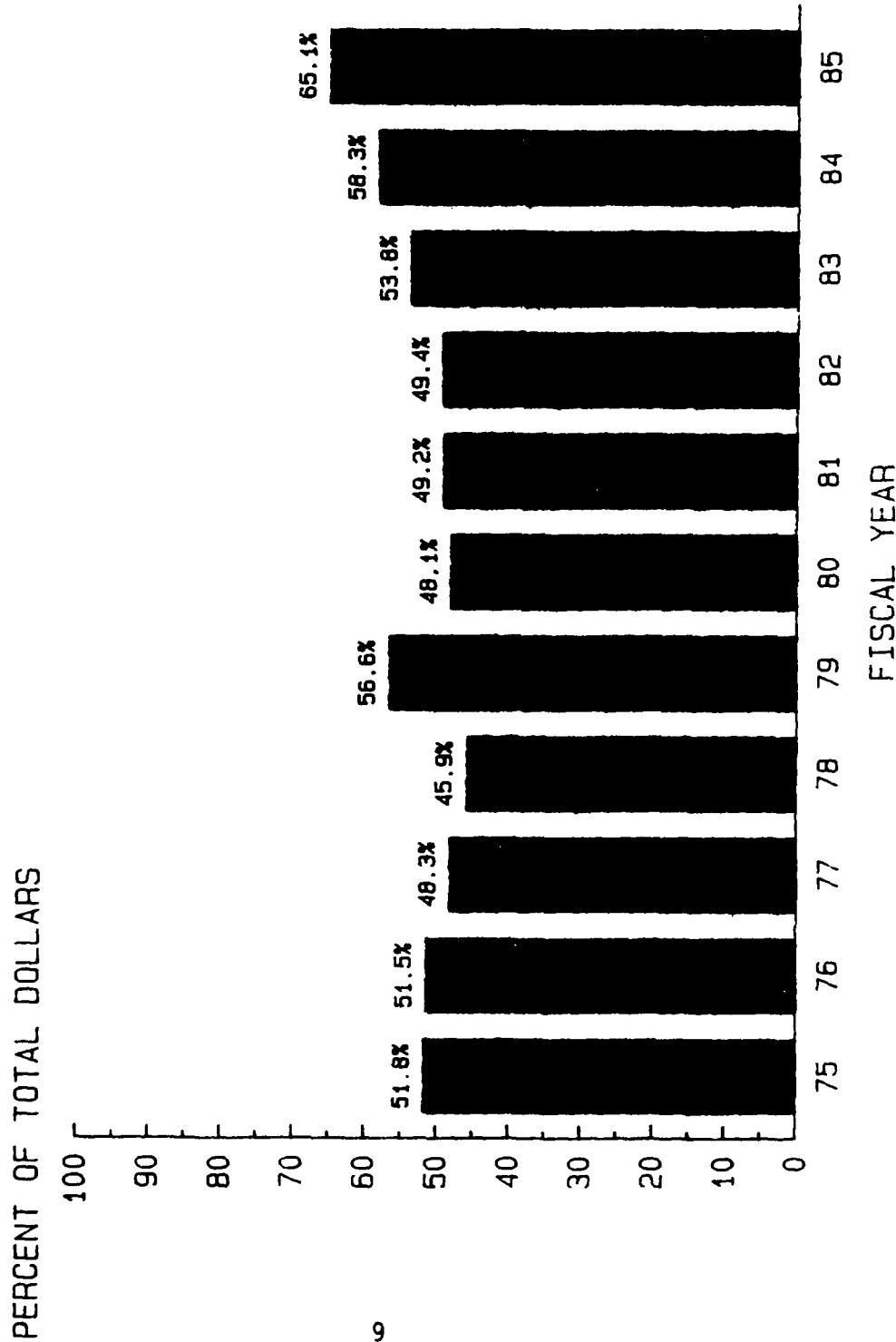


FY 75 - 82 = ACTIONS OVER \$10,000  
 FY 83 - 85 = ACTIONS OVER \$25,000

NO COST-REIMBURSEMENT CONTRACTS REPORTED BY DLA

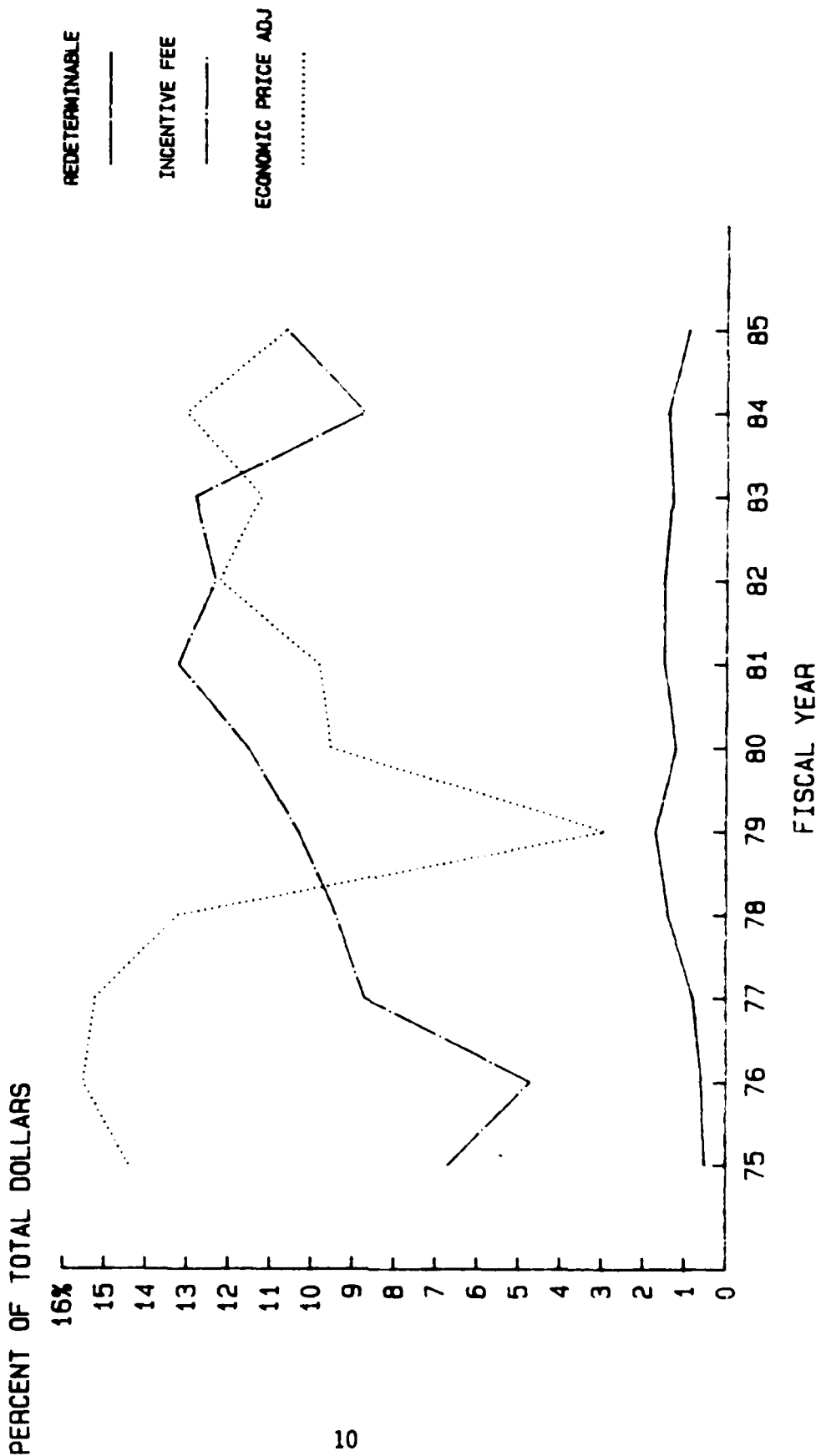
CHART 4

# PERCENT OF DOLLARS SPENT ON FIRM-FIXED PRICE CONTRACTS BY THE ARMY



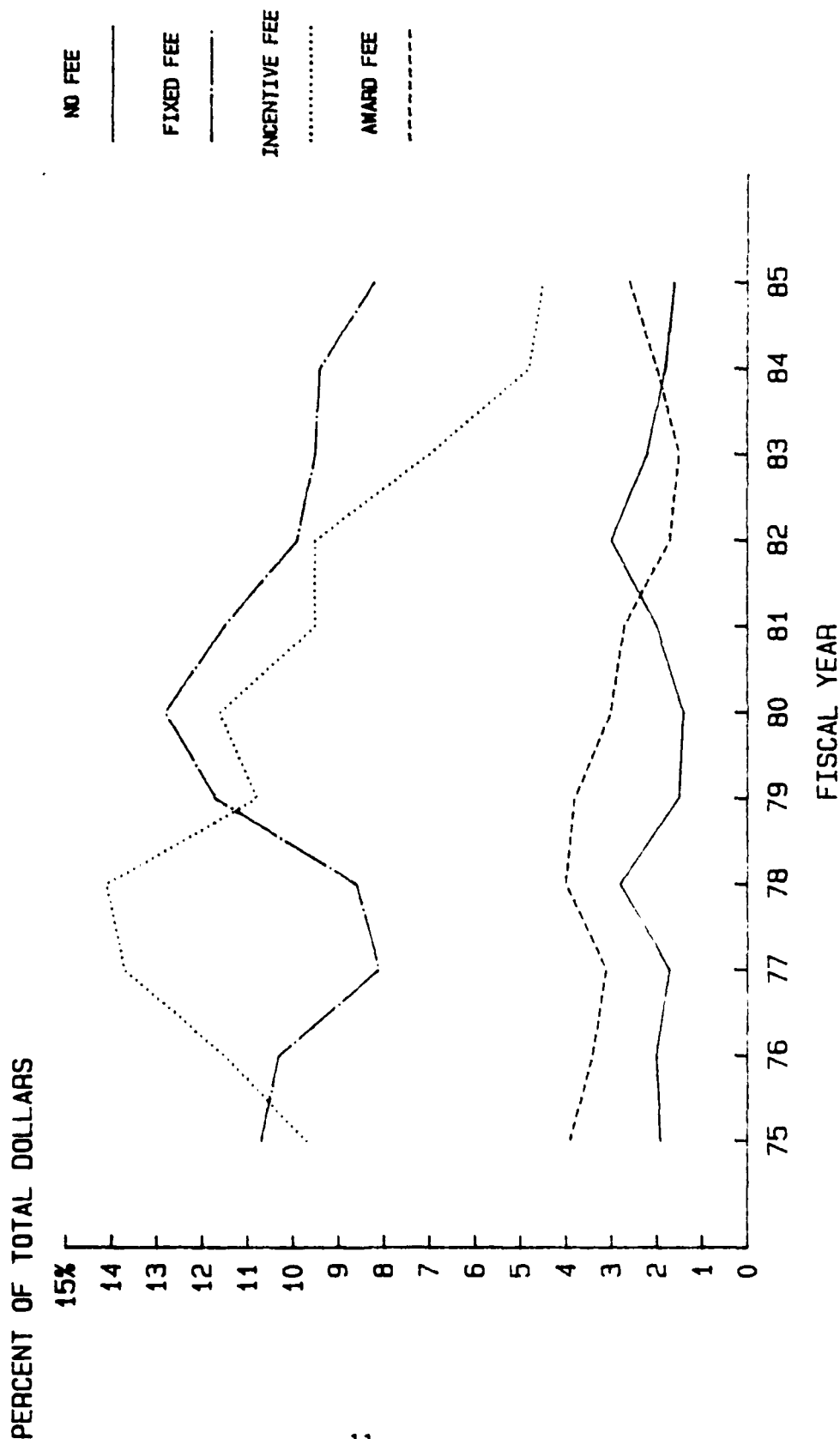
FY 75 - 82 = ACTIONS OVER \$10,000  
FY 83 - 85 = ACTIONS OVER \$25,000

# CHART 5 PERCENT OF TOTAL DOLLARS SPENT ON FIXED-PRICE CONTRACTS (OTHER THAN FIRM-FIXED) BY THE ARMY



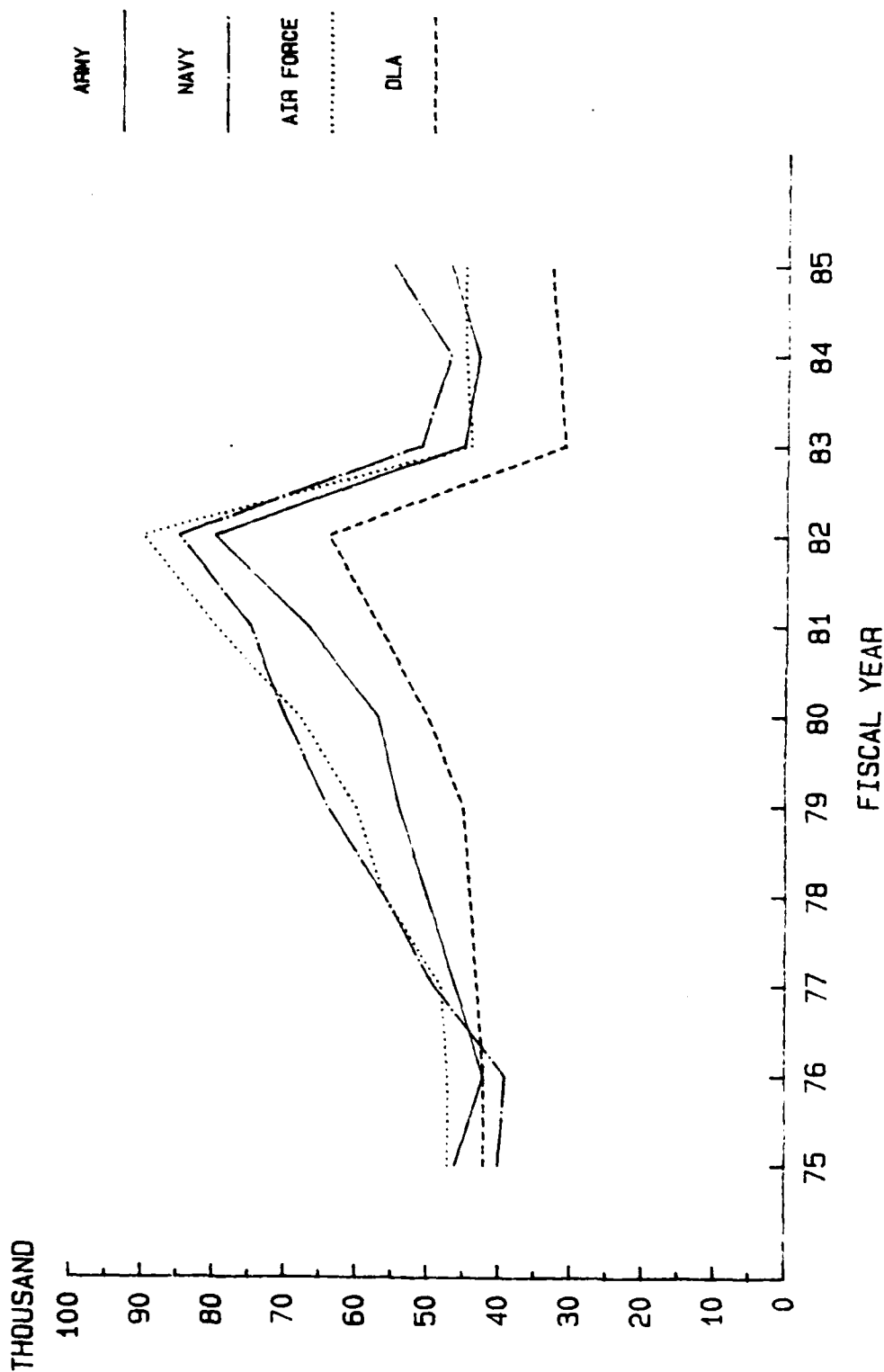
FY 75 - 82 - ACTIONS OVER \$10,000  
FY 83 - 85 - ACTIONS OVER \$25,000

# CHART 6 PERCENT OF TOTAL DOLLARS SPENT ON COST-REIMBURSEMENT CONTRACTS BY THE ARMY



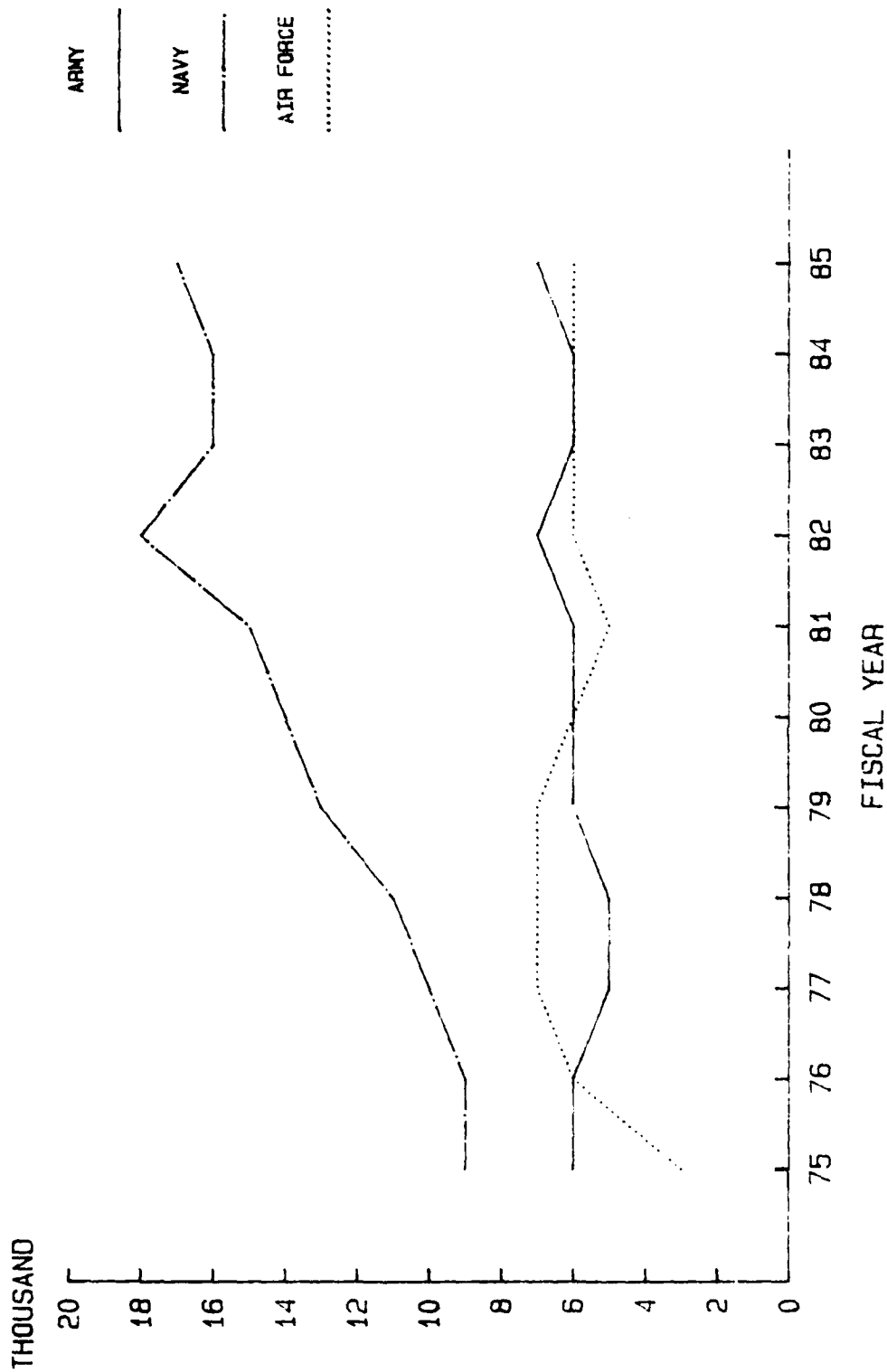
FY 75 - 82 = ACTIONS OVER \$10,000  
FY 83 - 85 = ACTIONS OVER \$25,000

# CHART 7 NUMBER OF FIXED-PRICE CONTRACT ACTIONS BY SERVICE (IN THOUSANDS)



FY 75 - 82 = ACTIONS OVER \$10,000  
 FY 83 - 85 = ACTIONS OVER \$25,000

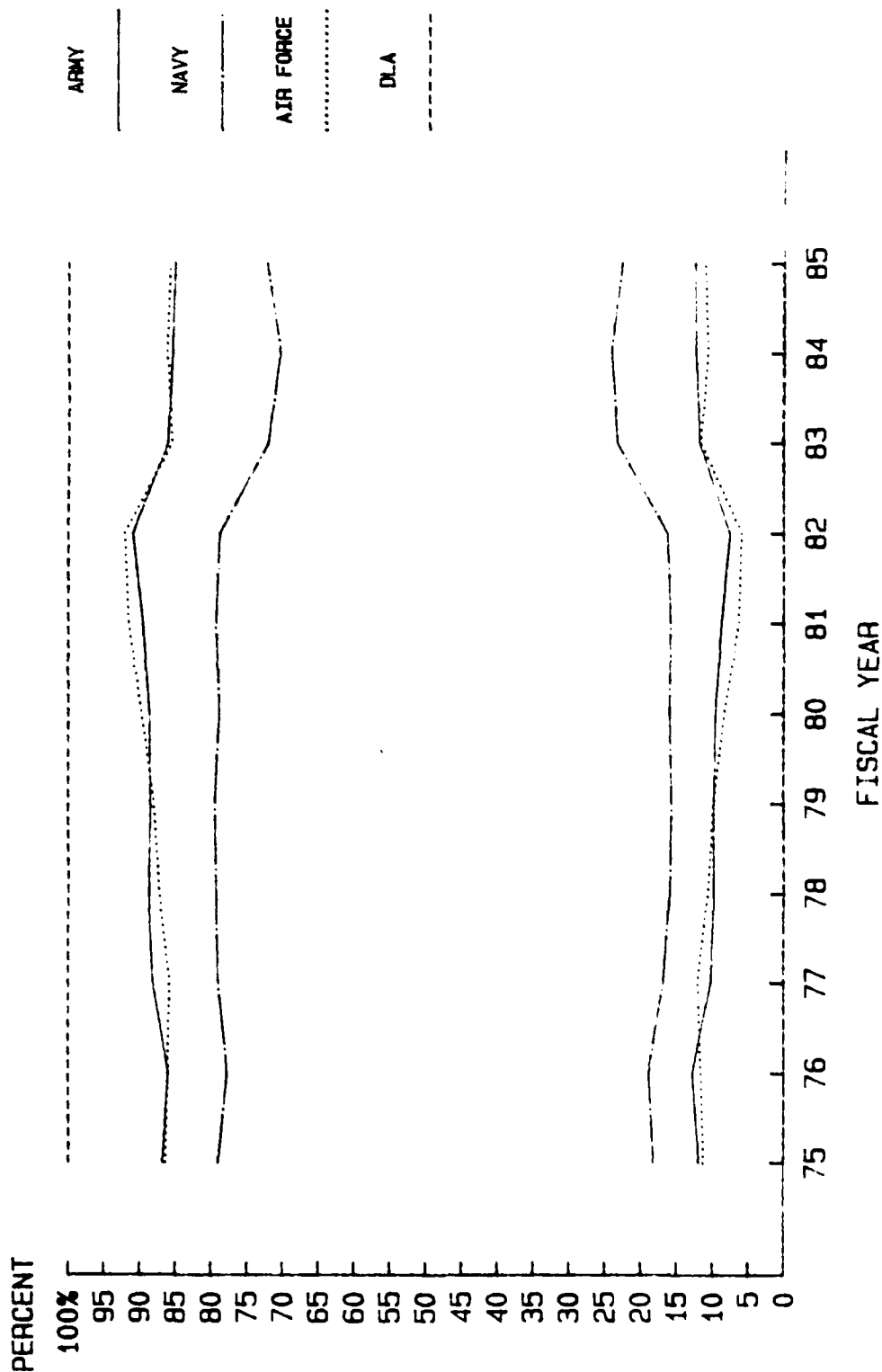
# CHART 8 NUMBER OF COST-REIMBURSEMENT CONTRACT ACTIONS BY SERVICE (IN THOUSANDS)



FY 75 - 82 = ACTIONS OVER \$10,000  
FY 83 - 85 = ACTIONS OVER \$25,000

NO COST-REIMBURSEMENT CONTRACTS REPORTED BY DLA

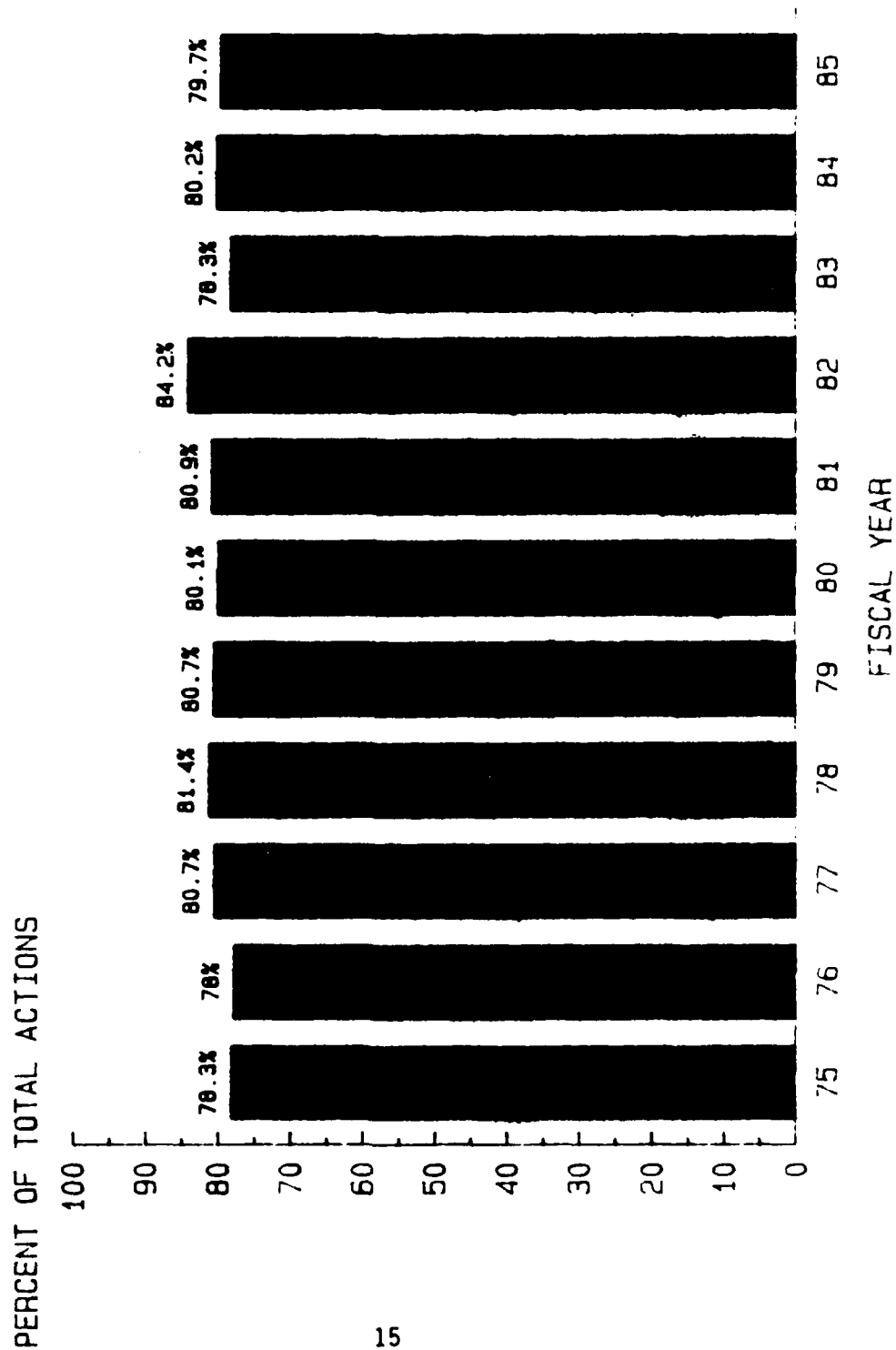
# CHART 9 PERCENT OF ACTIONS BY CONTRACT TYPE UPPER SCALE = FIXED-PRICE CONTRACTS LOWER SCALE = COST-REIMBURSEMENT CONTRACTS



FY 75 - 82 = ACTIONS OVER \$10,000  
 FY 83 - 85 = ACTIONS OVER \$25,000

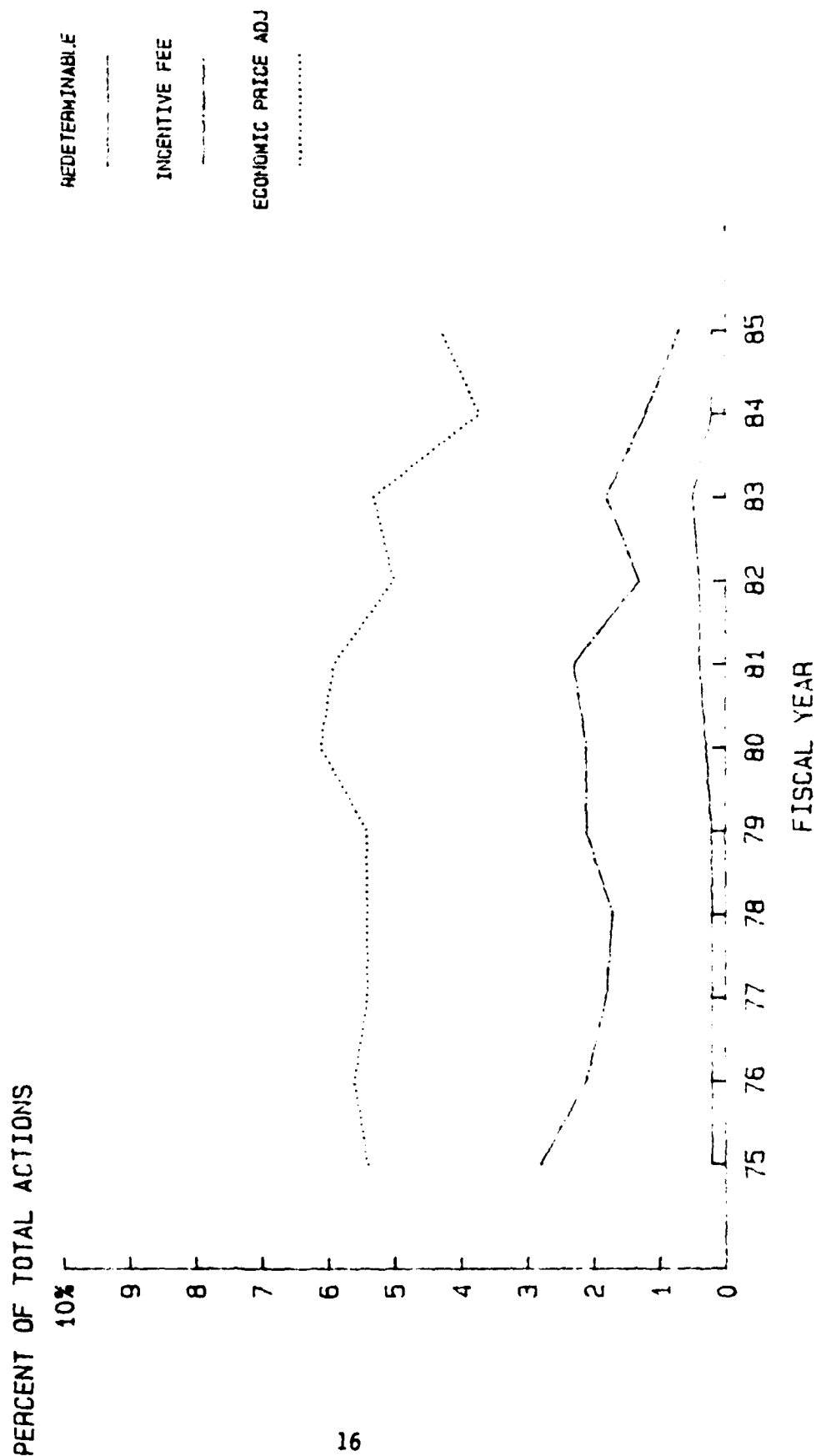
NO COST-REIMBURSEMENT CONTRACTS REPORTED BY DLA

# CHART 10 PERCENT OF FIRM-FIXED PRICE ACTIONS BY THE ARMY



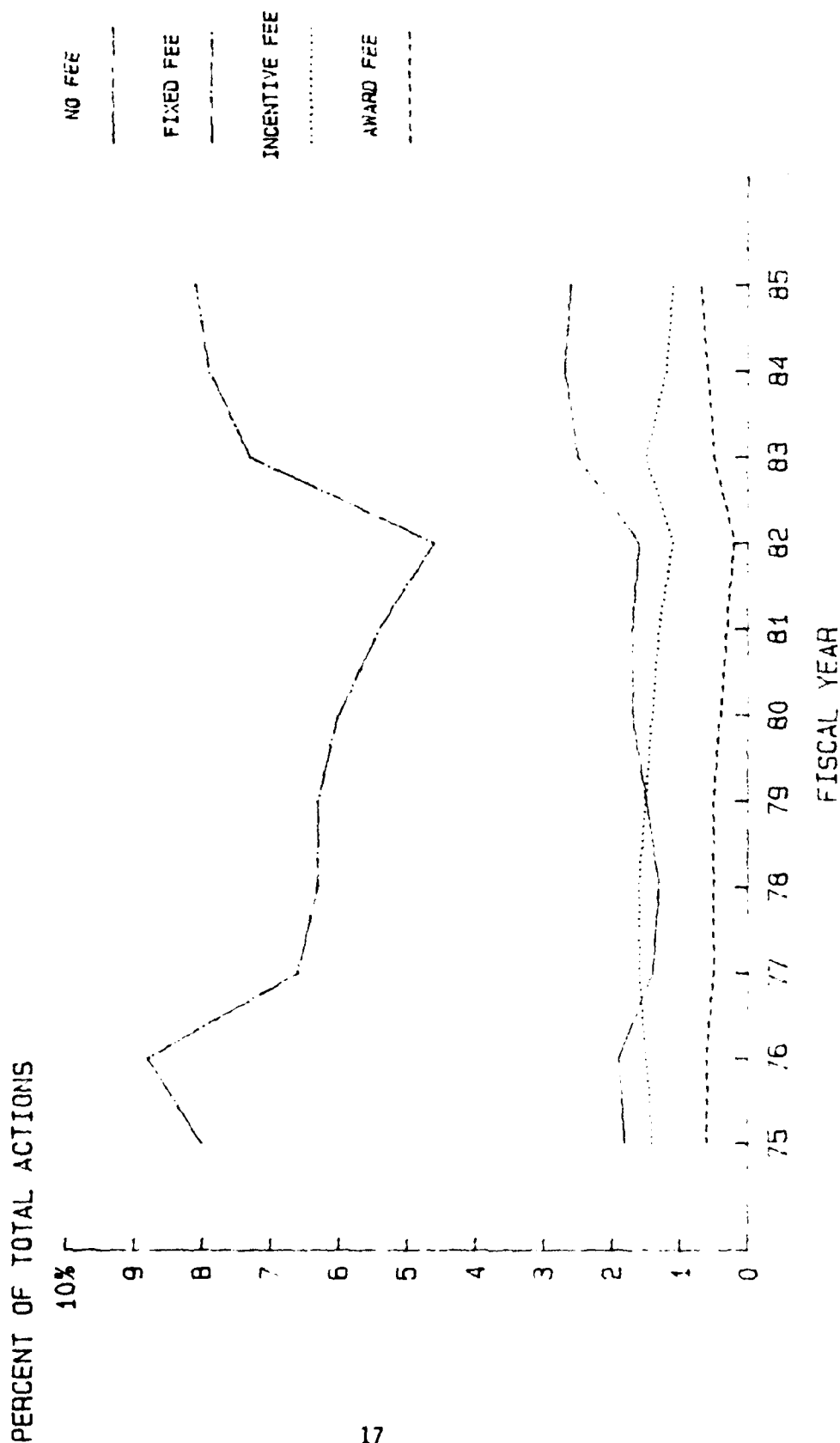
FY 75 - 82 = ACTIONS OVER \$10,000  
 FY 83 - 85 = ACTIONS OVER \$25,000

# CHART 11 PERCENT OF ACTIONS BY FIXED-PRICE CONTRACTS (OTHER THAN FIRM-FIXED) BY THE ARMY



FY 75 - 82 = ACTIONS OVER \$10,000  
FY 83 - 85 = ACTIONS OVER \$25,000

# CHART 12 PERCENT OF TOTAL ACTIONS BY COST-REIMBURSEMENT CONTRACTS BY THE ARMY



FY 75 - 82 = ACTIONS OVER \$10,000  
FY 83 - 85 = ACTIONS OVER \$25,000

UNCLASSIFIED

SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

REPORT DOCUMENTATION PAGE		READ INSTRUCTIONS BEFORE COMPLETING FORM
1. REPORT NUMBER  APRO 87-89-1	2. GOVT ACCESSION NO.	3. RECIPIENT'S CATALOG NUMBER
4. TITLE (and Subtitle)  Selected Trends in Contract Type Usage		5. TYPE OF REPORT & PERIOD COVERED  Final
		6. PERFORMING ORG. REPORT NUMBER
7. AUTHOR(s)  Monte G. Norton Donna Y. Martin		8. CONTRACT OR GRANT NUMBER(s)
9. PERFORMING ORGANIZATION NAME AND ADDRESS Office of the Assistant Secretary Army Procurement Research Office ATTN: SARD-KPR, Bldg. 12113 Ft. Lee, VA 23801-6045		10. PROGRAM ELEMENT, PROJECT, TASK AREA & WORK UNIT NUMBERS
11. CONTROLLING OFFICE NAME AND ADDRESS		12. REPORT DATE May 1987
		13. NUMBER OF PAGES 20
14. MONITORING AGENCY NAME & ADDRESS (if different from Controlling Office)		15. SECURITY CLASS. (of this report)  Unclassified
		15a. DECLASSIFICATION/DOWNGRADING SCHEDULE
16. DISTRIBUTION STATEMENT (of this Report)  Unlimited		
17. DISTRIBUTION STATEMENT (of the abstract entered in Block 20, if different from Report)		
18. SUPPLEMENTARY NOTES		
19. KEY WORDS (Continue on reverse side if necessary and identify by block number)  Contract type usage Contract type trends Contract comparisons		
20. ABSTRACT (Continue on reverse side if necessary and identify by block number)  Authors reviewed and analyzed contract type data for possible trends that provide insights or suggest areas for further investigation. Specifically, information on dollars spent and number of contract actions were collected for Army, Navy, Air Force, and DLA for fiscal years 75 through 85. Both fixed-price and cost-reimbursement dollars have increased substantially over this period, while the ratio of fixed-price to cost-reimbursement dollars		

UNCLASSIFIED

SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

UNCLASSIFIED

SECURITY CLASSIFICATION OF THIS PAGE(When Data Entered)

has gradually increased. The number of fixed-price actions has roughly doubled during this period while the number of cost-reimbursement actions increased to a varying degree among the services.

UNCLASSIFIED

SECURITY CLASSIFICATION OF THIS PAGE(When Data Entered)

END

9-87

Dtic